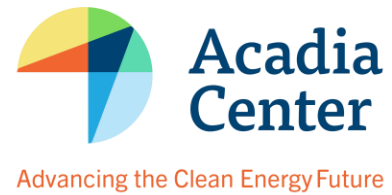


Testimony of Amy McLean Salls

Connecticut Director and Senior Policy Advocate

Public Hearing, February 20, 2019



Before the Energy and Technology Committee

Honorable Chairpersons Arconti and Needleman, Vice Chairpersons Fonfara and Allie- Brennan, Ranking Members Formica and Ferraro and Committee Members:

Acadia Center appreciates this opportunity to provide written testimony to the Public Safety and Security Committee regarding the bill referenced below. Acadia Center is a nonprofit research and advocacy organization committed to advancing the clean energy future. Acadia Center is at the forefront of efforts to build clean, low carbon, and consumer friendly economies.

1. Support H.B. No. 5002 A Act Concerning The Development Of A Green New Deal

Position: Acadia Center supports the Development of the Green New Deal, which can revitalize Connecticut by modernizing transportation and energy

Connecticut has an exciting opportunity to use proven transportation and energy reforms to revitalize and strengthen Connecticut's economy, competitiveness, and overall quality of life. The Green New Deal can seize this opportunity by pursuing five reforms:

- Modernize our transportation infrastructure to improve safety, access, and convenience;*
- Transition power generation to cheaper, cleaner, and more resilient local sources;*
- Improve energy performance in buildings to reduce costly energy use and emissions;*
- Change energy grid rules to reduce high energy costs and speed energy innovation;*
- Give communities and consumers more control over their energy choices.*

These reforms will unlock significant new economic, consumer, and public health benefits for our state. For instance – modernizing transportation only – could produce over \$8.9 billion in new economic benefits, add 14,900 new jobs, and create \$3.7 billion in public health and other benefits.

Remaking the transportation and energy systems must be a core part of Connecticut's new economic strategy. Newly-unleashed innovation will drive economic progress, improved quality of life, and more equitable benefits for all residents, businesses, and communities.

Lawmakers need to prioritize the existing initiatives and current programs and improve them so there is a strong base on which to place initiatives, such as ambitious offshore wind procurement, heat pump incentives, the lead by example program, and a fully funded energy efficiency program. For example, the solar industry is poised to grow if Connecticut makes good policy choices which encourage deployment not suppress it. The harmful changes to the net metering language in P.A 18-50 need to be addressed in this 2019 session in order to have a successful Green New Deal going forward.

Acadia Center has outlined a strategy to revitalize Connecticut's economy through clean energy and transportation investments in its recent report "Building a Stronger Connecticut."¹

2. S.B. 468, An Act Concerning The Installation Of Solar Panels On State Land Near Public Highways

Position: Acadia Center supports this proposal of solar panels on public lands or private lands.

Acadia Center has been very supportive of this program in Massachusetts and have assisted in getting the model established there. Connecticut will have to coordinate with multiple agencies to create a working, coordinated and successful effort. The solar industry will be very supportive as are many in the energy advocates community. The Green New Deal should include all ways to increase the deployment of solar and this method should be included to help us reach or aggressive RPS and carbon emissions goals.

3. H.B. No. 5789 An Act Concerning The Lead By Example

Position: Acadia Center supports the continuation of Lead By Example as it is a win-win-win opportunity to foster in-state job creation and economic development while reducing the states substantial energy costs and helping meet its climate goals.

Acadia Center urges the legislature to support legislation that expands and accelerates the current LBE program in order to create more in-state jobs and encourage economic development while reducing state energy costs. LBE is a foundational piece of any state clean energy strategy. With each completed LBE project it saves money for taxpayers, eliminates costly energy waste in the state building sector and helps protect our air and climate by reducing emissions.

4. H.B. No.6242 An Act Prohibiting Surcharges From Being Levied On Utility Customers To Subsidize Interstate Natural Gas Pipeline Capacity

Position: Acadia Center supports this bill to the extent it limits ratepayer liability for unnecessary natural gas pipelines that would lock in future GHG emissions.

Acadia Center supports prohibiting ratepayer dollars from subsidizing new natural gas pipelines. Acadia Center has previously analyzed the impacts of a proposed major expansion of pipeline capacity and have found that many of the proposed benefits of this investment, such as ratepayer savings and reliability, are overstated.² For example, using hard-earned ratepayer dollars for major new natural

¹ See: https://acadiacenter.org/wp-content/uploads/2018/12/Acadia-Center_CTGovernorMemo_2018.pdf

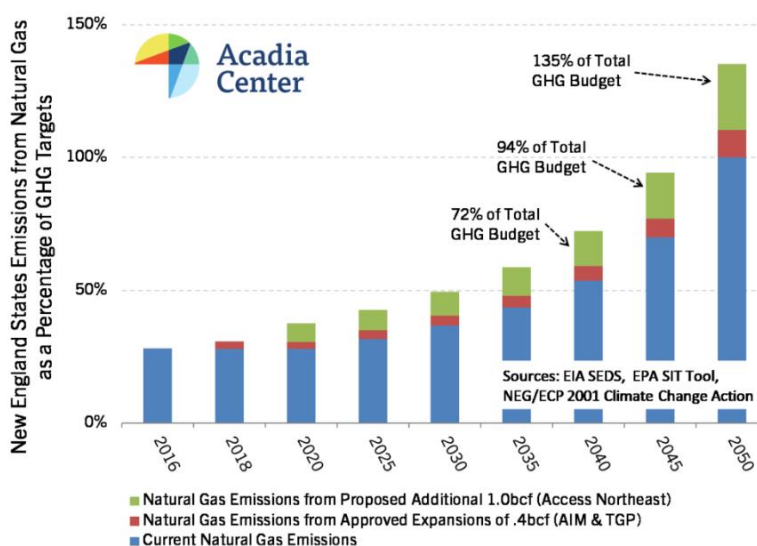
² See: <https://acadiacenter.org/clearing-the-air-long-term-trends-and-context-for-new-englands-electricity-grid/>

gas pipelines would not have any impact on electricity prices until construction is finished, which could be in 2022 or even later. Furthermore, there are good reasons to think that purported consumer savings would not outweigh the guaranteed costs that ratepayers would have to pay. Major regional investments are currently being planned for offshore wind and new transmission lines for clean energy that would come online in the same timeframe as a pipeline, and these investments undercut many of the alleged benefits of a pipeline.

In the shorter term, many other available policy options can help improve the reliability of New England's grid and reduce costs, while simultaneously lowering emissions. Last year, ISO-NE began implementing new market reforms that provide incentives to generators to respond during times of high demand and high prices. Additional investments in energy efficiency for natural gas and electricity, fixing leaks in the natural gas distribution system, advanced energy storage, local renewables, and grid modernization will start to help right away with energy prices and reliability, while simultaneously advancing the region's long-term emissions requirements.

Finally, Connecticut and the region cannot afford to lock-in the increased GHG emissions from a new pipeline. GHG emissions from natural gas combustion across all sectors, including those from gas delivered through two recent regional pipeline expansions, will be an increasingly significant percentage of overall regional GHG emission limits over time. Looking at combustion emissions in isolation also understates the overall impact of emissions from natural gas because it ignores the significant GHG emissions during extraction and delivery. Adding new rate-payer funded pipeline capacity would only exacerbate this issue, potentially increasing combustion emissions from natural gas to 49% of the overall regional GHG emissions target in 2030, and that would rise to 135% in 2050.

Natural Gas Combustion Emissions in New England from All Sectors Versus Overall Regional GHG Emissions Requirements



5. H.B. No. 7016 An Act Concerning The Conservation and Load Management Plan And the Installation Of Heat Pumps

Position: Acadia Center supports this bill as it will help accelerate the deployment of highly efficient clean heating options for consumers

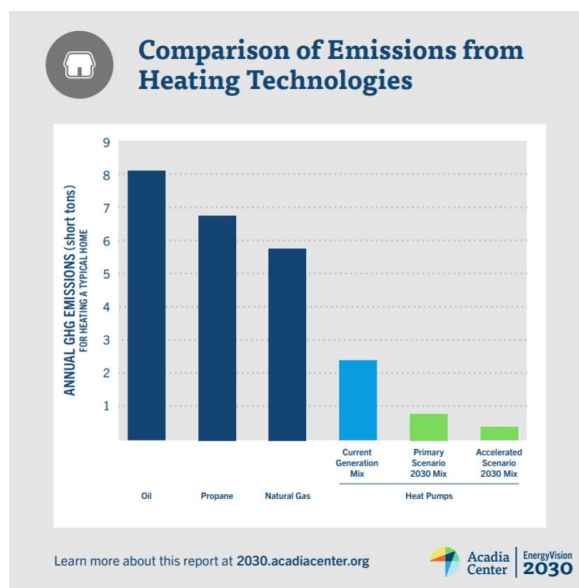
Connecticut's building sector relies heavily on fossil fuels for its heating needs—for instance, 35% of Connecticut households use natural gas and 45% use fuel oil or propane.³ This overreliance on imported fossil fuels ends up costing Connecticut consumers roughly \$1.2 billion annually.⁴ Converting the building sector to more affordable clean heating technologies is now possible with recent advances in performance and cost reductions. Heat pumps are the most promising of these newer technologies—offering highly efficient performance, consumer savings, and zero on-site air pollution.

Heat pumps extract heat from either outside air or the ground and move it into a building to heat it. An air conditioner is a type of heat pump that moves heat from inside a building to the outside to cool it; heat pumps simply reverse this process during the heating season and can now efficiently function even in cold Northeastern winters. With today's electric generation mix, heat pumps provide immediate GHG emissions reductions. Currently, heat pumps reduce emissions about 70% compared to oil heat and about 60% compared to natural gas.⁵ As generation grows cleaner, emissions from heat pumps will continue to decline. Installing heat pumps today creates a “renewable-ready” infrastructure that will take advantage of a cleaner energy grid as renewables continue to come on line at a faster rate.

³ See U.S. EIA <https://www.eia.gov/state/?sid=CT>

⁴ Acadia Center analysis of SEDS data for Connecticut for 2016

⁵ See Acadia Center, *EnergyVision 2030: Buildings Companion Brief* (2017), at pp. 3-4, available here: <http://2030.acadiacenter.org/wp-content/uploads/2017/05/Acadia-Center-EnergyVision-2030-Buildings.pdf>



The Conservation and Load Management Plan (C&LM) has a long history of helping Connecticut's residents and businesses reduce their energy costs and GHG emissions by installing efficient technologies. Acadia Center urges the committee to explicitly allow conversions of fossil fuel heating to heat pumps within the C&LM Plan.

6. H.B. No. 6240 An Act Requiring the State Building Code to Have Requirements to Improve Energy Efficiency

Position: Acadia Center supports this bill to the extent it advances energy efficiency and reduces greenhouse gas emissions in the state

Energy efficiency is a cornerstone of good state and regional energy policy. Investments in energy efficiency reduce consumer energy bills and minimize the need for expensive energy infrastructure like transmission lines and power plants. Building code requirements that improve energy efficiency are an important component in the suite of efficiency policies that states should adopt.

In considering energy efficient building codes, Acadia Center urges the committee to consider measures that reduce overall energy consumption (not just electric consumption) and minimize greenhouse gas emissions. Building codes that require highly efficient heat pumps would increase consumer access to these technologies that generate consumer fuel-cost savings and avoid the cost of installing a traditional fossil fuel system. Adding efficient heat pumps to the state building code would also help familiarize HVAC building trades with this important technology and limit unnecessary natural gas expansion. Increasing the market share of homes with heat pumps will also increase consumer familiarity with these technologies.

Similarly, EV-Ready building codes that support the transition to electric vehicles help reduce GHG emissions and consumer costs. EVs are a critical component of the state's GHG emissions reduction strategy, as they cut emissions 75% compared to conventional vehicles and emit no tailpipe nitrogen oxide (NOx) pollution.⁶ EVs also provide significant consumer savings, costing about \$1.30 less to drive per-gallon equivalent than conventional vehicles.⁷ EV-Ready building codes ensure that new construction is capable of supporting EV charging by requiring sufficient electrical infrastructure to be built into garages or parking areas at the time of construction; they do not include the EV charger, which would be purchased by the building owner. The additional cost to install this infrastructure at the time of construction is minimal to the cost of the construction, but it can reduce charger installation costs around 75% compared to retrofitting.⁸

Thank you again for the opportunity to testify. Please do not hesitate to contact me if you have any questions.

For more information:

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⁶ See Acadia Center's EnergyVision 2030 analysis: 2030.acadiacenter.org/transportation/

⁷ Based on U.S. Department of Energy's e-gallon methodology using Eversource's January 2019 price of \$0.20892/kWh and the average 2018 price of gasoline in New England from EIA of \$2.74/gallon. See: <https://www.energy.gov/sites/prod/files/2016/01/f28/eGallon%20methodology%20%28Updated%20January%202016%29.pdf>, <https://www.eia.gov/petroleum/gasdiesel/>, and https://www.eversource.com/content/docs/default-source/rates-tariffs/rate-1-ct.pdf?sfvrsn=a024c062_2.

⁸ Pike, E. et al. "Driving Plug-in Electric Vehicle Adoption with Green Building Codes," 2018 ACEEE Summer Study on Energy Efficiency in Buildings: [https://aceee.org/files/proceedings/2018/node_modules/pdfs-dist-viewer-min/build/minified/web/viewer.html?file=../../../../assets/attachments/0194_0286_000432.pdf#search="pike"](https://aceee.org/files/proceedings/2018/node_modules/pdfs-dist-viewer-min/build/minified/web/viewer.html?file=../../../../assets/attachments/0194_0286_000432.pdf#search=)